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ABSTRACT

One of the major issues in education is curriculum relevancy. To make education more relevant, curricula have been revised and redesigned; but many of these revisions have failed to be implemented at the classroom level because teachers and administrators are incapable of changing the classroom environment. Traditional 19th century instruction methods of lecture and recitation impede the implementation of curricular innovations. Before curriculum reform can be attained, instructional methods must be made compatible with the anticipated reforms. (RA)

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Theory and Phenomena in Curriculum Research: The Classroom as a Test Case*

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All of us who are concerned with Curriculum, the enquiry that explores how conceptions of education might be enacted within the forms of schooling, face a common dilemma. We must have a clear vision of what education implies otherwise we would have nothing to strive for, nothing to worry about and no problems. However, such a starting point for enquiry poses its own problems; it tends, in the nature of things, to make it difficult to look benignly on schooling as it is. The consequences of a meliorist perspective have long beset our field: too often we have not been able, because of our commitment to what should be, to look at what is, to ask why. To look at what is betrays, our emphases suggest, too little passion, even perhaps a conservative willingness to accept with schools as they are. All too often our emphases imply a condemnation of what schools do, with the consequence that we have difficulty with accepting even the possibility that the schools have in fact succeeded in doing well many of the things that they set out to achieve.

Curriculum's posture of condemnation, or at least condescension towards the schools, is, we believe, self-defeating. It seems to us more productive to start with a different assumption--to assume that the goals

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of the nineteenth century founders of public universal education have been amply fulfilled and then ask how was this done. The answer to this question is one indispensable basis for any exploration both of what must yet be done to make the schools more truly educative and for any rehearsal of ways and means for enacting any new charter of purposes.

To ask how was this done we have to look at schools and ask what are they and how do they work? Curriculum's almost systematic failure to address this reality meaningfully is one basis of the charge of irrelevance that is so often, and so properly levelled against our field. Curriculum is, we suggest, irrelevant to much of the practice of schooling because it has ignored that practice, because it has ignored schooling as it is. Our vision of a new world has obtruded so completely on our perceptions of what schools are and how they work that we have missed this reality; and in missing this reality we have lost sight of what should be the central mission of curriculum research, the search for an understanding of the phenomena of schooling that must be at the forefront of any realistic preoccupation with the improvement of schooling.

This task of understanding the phenomena of schooling is the enterprise we wish to illustrate here as it bears on the most fundamental component of schools, the classroom. We want to take as our text two closing paragraphs from the now well-known paper of James Hoetker and William Ahlbrand on "The Persistance of the Recitation" and try to show how their questions might be answered.

> The studies that have been reviewed show a remarkable stability of classroom verbal behavior patterns over the past half century, despite the fact that each successive generation of educational thinkers, no matter how else they different, has condemned the rapid-fire, question-answer

> pattern of instruction. This opens a number of interesting avenues of enquiry. What is there about the recitation, for instance, that makes it so singularly successful in the evolutionary struggle with others, more highly recommended methods? That is, what survival needs of teachers are met uniquely by the recitation?
>
> If the recitation is a poor pedagogical method, as most teacher educators have long believed, why have they not been able to deter teachers from using it?[1]

We will argue that the classroom has particular characteristics which are inherent in its nature (given its goals and resources): these characteristics cause the classroom to be a social system with only limited potentiality for manipulation by teachers. Thus, exhortation to change practices without a concomitant concern for changing the conditions which lead to these practices will, in the main, be futile because, given these existing conditions, change is difficult. The recitation has persisted through the fifty years that Hoetker and Ahlbrand have explored because the fundamental characteristics of the social setting of the classroom that have made the recitation adaptive have persisted through those fifty years. Let us turn to this argument and some data we have been collecting to see how far our argument might get us.

II

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Teaching is an activity given its essential character by an intention on the part of the teacher to engender learning in his students. The teacher's intentions are grounded in conceptions of the goods that "educa-

tion" connotes that are prior to any individual teaching act and it is the teacher's task to bring an understanding and appreciation of these goods to his students; by means of talk, exercises, modelling and the like the teacher mediates between an array of goods and the capabilities that his students have for understanding and coming to terms with those goods. To fulfill this mission the teacher must perform three tasks: he must present that which he wishes to teach, he must give his students opportunities to practice that which is to be learned, and he must allow for potential or real lapses in his student's intrinsic interest in the experience he is undergoing by setting up conditions which ensure that his students are both ready, and interested in learning.

This conception of the tasks of the teacher holds, we believe, for all teaching. It is easiest to visualize the implications of the conception in the individual tutorial where the tutor searches for the place his student is at, and then takes him through a series of experiences designed to lead to learning. To do this the teacher must present that which he wishes to teach, he must give him opportunities to practice that which is to be learned, and he must allow for lapses in attention by setting up conditions, which are designed to ensure that his student is ready to learn.[2]

The classroom does not alter the essential character of these teaching tasks, but it makes their execution more complex: a classroom has numbers of students who are at different states of readiness for the particular learning at hand, are at different ability levels, have different enthusiasms, and, inevitably, differing willingnesses to attend, here and now, to this particular topic. The classroom is, moreover, characteristically embedded in an organizational context which makes its own demands on the teacher. Thus, over and above the demands associated with abstract con-

ceptions of education and the needs (real or abstract) of students in a classroom there are inevitable organizational stipulations about what education should mean for this class, in this place, for these students, and consequently for this teacher.

Organizational stipulations also specify what classrooms should be like and what resources should be given to teacher to perform his tasks. These stipulations limit, by their provision of desks, space, and the like the options that a teacher might have, theoretically at his command, to vary what he might do to meet the needs both of a class and of the individuals in that class. As Kaspar Naegele noted, the teacher "must cope with the present exigencies of the classroom as one kind of social system, of which he is a part and which is as well part of a larger structure, as well as with the necessity to transform [students] into adults, both on the delimited plane of various skills and knowledges and on the more general plane of more pervasive dispositions and capacities."[3]

The classroom, then, seriously modulates a conception of teaching derived from images of the tutorial. In addition to the universal tasks of (i) presenting and covering a body of material to students, (ii) engendering mastery of that material by his students, and (iii) creating affect on the part of his students so as to secure compliance to the demands of the learning situation, the classroom teacher must manage his class, an aggregation of individuals he played no part in recruiting, but who must work together in the interests of task attention and order.[4] In the usual classroom the teacher must meet these demands with only three resources, himself, a text or two, and such group climate as can be created

be created by the school.*

ii

We can see how limited the resources of many public school teachers are and something of the nature of conventional classrooms in data reported by a recent survey of the teaching of Canadian history. One hundred and nine classrooms in secondary (and some elementary) schools of all provinces were visited by the project staff: 62% of the rooms surveyed contained no other materials than blackboards, chalk, desks, and student texts; 30% of the schools had no libraries.[5] The methods used in these classrooms were as one might expect. Eight hundred and forty-seven class periods were observed: 21% of these periods were lectures in which there was "absolutely no discussion or student participation," 51% of the periods were classical assignment recitations, 10% of the classes showed evidence of some student-initiated questioning, and 9% of the periods were "student-centered" discussions. These discussions, as Hodgetts' notes, were overwhelmingly reactions either to student reports that were, in their turn, poor copies of texts or encyclopedias or else discussions of the following kind:

"I think Confederation is a good thing."

"I think it is a bad thing. I'm against it."

"I'm for it."

"What good will it do you?"

"What harm will it do?"

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*In the interests of simplicity of presentation we have sketched these four demands in subject- or skill-teaching terms. They hold, we believe, for all teaching. A group therapist must meet the same demands: he must facilitate his client's working through of his problem, he must assist his client in working out his problem, he must create a relationship in which the client can do these things, and he must create a working setting in the group which facilitates this work.

"No harm. I just don't like it."

"Well, I do!"

"Let's have a vote."

As the report concluded, "This may have been fun, but hardly worthwhile either in terms of skills or knowledge."[6]

If we reflect on these findings from the viewpoint suggested by our conception of the four essential tasks of the teacher, three different observations come to mind. First, there is a sense in which even dictation is preferable to a mindless and information-free discussion; effective discussion in which a class is focussed on the problem in hand requires great skill on the part of the teacher and, in large classes, is extremely difficult. Second, reports based on the already predigested material of the text and the encyclopedia rarely enrich the intellectual climate of a classroom. Third, from the point of view of the teacher who must meet in some way the demands of coverage, mastery, affect, and management with limited resources, the recitation and the lecture are classroom methods which do offer the potentiality that these demands of the classroom setting will be met. The give-and-take of the recitation permits the teacher to focus attention on the content at hand, and to inject new material or insights into the room while, at the same time, adjusting pacing, humour, and the qualities of his expectations to the needs of the class. Likewise, the lecture permits the teacher to introduce new material, linger over points of difficulty, and tell humorous or interesting stories while he monitors the learning needs of the class. Not all classroom methods and techniques perform these tasks equally well.

iii

Almost all studies of classroom behavior suggest that the picture of the Canadian history classroom that we sketched above is generally representative. The recitation is the most characteristic teaching behavior to be found in schools and is followed in frequency only by occasions when the teacher is organizing his room or disciplining a class for infractions of one kind or another. This appears to hold for both elementary and secondary classes; there is very little difference in feel for example between the kinds of teacher activity reported in Table 1 (senior high school social studies) and Table 2 (Grade 3). And, as Hoetker and Ahlbrand

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Insert Tables 1 and 2 about here

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have found, this pervasiveness of the recitation has been a fact of classroom life for the past fifty years.

The conception of the tasks of the teacher we outlined above offers one way of accounting for both the persistance of the recitation and the pervasiveness of controlling and managerial behavior in classrooms. The recitation is a functional pedagogical strategy for teachers inasmuch as it permits them, given their resources, to cope with the demands of the classroom setting. The recitation is a coping strategy within the repertoire of methods of the teacher that secures some task attention, gives some measure of control over the activity of students, facilitates coverage of content, and offers a drill and practice situation that leads to some, albeit more often than not a nominal, mastery of the facts that carefully tailored tests require as the symbols of school learning.[7] What other procedures, we can ask, are as effective in moving a class, securing con-

trol, and forcing students to practice what they are supposed to be learning? Likewise, we would suggest that we can see the pattern of typical classroom behaviors sketched in Tables 1 and 2 as a reflection of response to these same setting-induced needs and problems: the recitation and the lecture are pedagogically-productive strategies at the command of the teacher, management and discipline are responses on the part of teachers to the problems of focus and task attention that recitations and lectures create amongst aggregations of desk-bound students.

iv

Let us cite an example of method drawn from the repertoire of coping strategies of one master teacher to support our thesis that the primary task of any effective classroom method is to secure a compromise between the different and often competing demands of the classroom setting. Our example is drawn from the remarkable record of L.M. Smith's semester-long relationship with William Geoffrey, a seventh-grade teacher in a slum school.[8]

Geoffrey was, as is clear throughout the record of his work at Washington School, a text-book teacher. Yet, as Smith notes, "it seems possible to describe textbook teaching and its corollary, the daily lesson, by good and bad names"[9] (p. 183). Smith's field note, made as he first became aware of the good and bad implications of the test, suggest the functionality that text-teaching offered to Geoffrey:

> 2.27 "I have a couple of items. Some of you have been wanting art. We'll need some newspapers. If you have some lying around, bring them from home." Then scurrying around for paper, pencil sharpening, assign-

ments, and so forth. Everyone busy. Book reporting. Geoffrey shakes his head 'no' over Billy's report, while keeping eyes on the class. ...(Textbook teaching eases the preparation by the teacher: there is no problem organizing, no problem bringing in materials, preparing exercises, and so on. There's a clarity of sequence for pupils. Also, and probably very important, there's a firm focus on where one is at all times.) (9/10)[10]

Smith and Geoffrey's formal hypothesis derived from the reflection (see Figure 1) is a statement that can readily be interpreted in terms our conception of coping behavior. Their comment on Geoffrey's strategy in

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Insert Figure 1 about here

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coping with the consequences of an emphasis on the text is equally interpretable in these terms:

In Geoffrey's classroom, the lack of interest in the textbook was countered, especially with the seventh graders, by his skill in interpersonal relations, for example personalized interaction.... Finally, the impact of the textbook-guided daily lesson on the teacher's preparation, time and energy, seemed to us important. In a situation that is so demanding and fatiguing, any savings is a tremendously reinforcing contingency. We hypothesize that this relates to career concerns such as graduate study and school-wide activities that 'gain

the attention of superiors' as well as energy to play the classroom game."[11]

Smith and Geoffrey's formal analysis of the role of personalized interaction offers an interpretation of Geoffrey's behavior which can be readily assimilated into the terms of our conception of coping behavior.

Insert Figure 2 about here

To this point we have been sketching the problems of the classroom setting and the responses of teachers to these problems in fairly loose ways. Let us now attempt to sustain the thrust of this interpretation by a detailed examination of some findings about the effectiveness of different classroom methods.

During some classroom activities students receive continual goading from the teacher: they are required to respond to an externally, i.e. teacher controlled input--quizzes, recitations, and round robin readings are managed in this way. In other class activities the task is specified but students control their own schedules as they perform the task: seatwork in which some exercises must be finished, but in which there is no continual external demand for action would exemplify this kind of activity.

In his study of third grade classes Paul Gump found that when measures of involvement (eyes on task at hand) were compared with the nature of the activity significant associations appeared between involvement and form of student pacing. Gump's findings about the broad relationship between kind of pacing and student involvement are set out in Table 3; these results

Insert Table 3 about here

clearly suggest that the teacher is faced with more difficult pupil management problems in self-paced activities than he is in externally-paced activities.[12]

Gump found that different classroom methods appear to have differing effectiveness for controlling involvement. Figure 3 sets out the associations he found between method and involvement and, by implication, illus-

Insert Figure 3 about here

trates the problems that a teacher faces as he considers what method or combinations of method he should use or prefer. The students in small-teacher led groups were more highly involved than students in full-class teacher led groups; but, practically, this high involvement could only be achieved for some students at any given time. When some students are in small groups working with the teacher other students must be left in settings which are less effective. One teacher can only be a member of one group and running a number of parallel groups presents its own problems: as Gump suggests,

> the teacher has more arenas to keep in mind and she can only act in one at one time; this requires that means for guiding pupil action beyond continuous teacher input must be developed...added to this is the fact that activity in one segment may interfere with activity in

another. For these reasons we would speculate that operation of simultaneous segments, as compared to en masse ones, requires more teacher preparation and more ongoing vigilance and effort. Research is needed on this point.[13]

The six Grade 3 teachers Gump observed appear to have resolved the problem of securing maximal (or rather optimal) involvement on the part of their students while at the same time maximizing their own usefulness to the class (given the different involvement different methods appear to secure) by making three different kinds of decisions about the activities in their room.

1. The overwhelming proportion of their time should be given to the business of group teaching, i.e. to activities which would externally-pace members of the class. (see Table 2)

2. Language arts, social studies, science and arithmetic could best be taught by way of class recitation, methods which would secure "adequate" continuing involvement on the part of their students. This decision permitted the teachers to maximize the involvement of all students, albeit in only an optimal way while at the same time minimizing their own organizational and management problems in these subjects (see Table 4).

Insert Table 4 about here

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3. Reading practice could best be given by way of the high-involvement "reading circle"; however the choice of this method entailed the creation of small groups in the room which meant that the remainder of the students in the room had to be working by themselves (i.e., in self paced settings) with workbooks and the like).

The consequence of these decisions for students are set out in Table 4. Individual work played a significant part in the lives of these students only when the teacher was elsewhere, working with other students. Mastery and coverage were provided, in large part, by group and class instruction. Self-pacing, private work, was common enough, but it occurred when the teacher was conducting small group instruction in the reading circle at the back of the room. The preferences that the teachers showed so consistently for the recitation suggest clearly their feelings fo· how learning should be managed in the social setting that is the conventional classrooms.

One further set of observations can carry us as far as we can go at this point to sustain and amplify the argument that, to understand the behaviors of teachers in classrooms, we need to look carefully at the characteristics of the classroom as a workplace, as a place where teachers must perform certain tasks, with limited resources, to meet a series of often inconsistent expectations about the outcomes of their activity.

In a set of re-analyses of data collected as part of the evaluation of the 1962 reforms of the Swedish upper elementary and junior secondary school, Urban Dahllof found that the teachers seemed to adjust the timing of their shift from one content unit to another by closely monitoring the learning of students <u>in their rooms</u> who fell between the 10th and the 25th

percentile ability group. Dahllöf[13] termed this group of students the steering criterion group and hypothesized that many of the hitherto inexplicable problems in the interpretation of studies of the merits of homogeneous versus heterogeneous streaming can be explained in terms of the steering criterion group phenomenon:

> In [our] model, final achievement level in a certain curriculum unit is seen as a function of initial ability, level of objective, and time devoted to that curriculum unit. Traditional classroom instruction is characterized by the fact that the rate of teaching is steered by a group of students at the lower level of the ability distribution in the class, probably in the region between the 10th and the 25th percentile, thus causing a considerable delay or overlearning of little additional gain for the pupils in the upper half of the distribution.... The main outcome of these considerations is that ability grouping may be regarded as an in-between solution to complete individualization, being more effective for the brighter children than traditional classroom teaching in comprehensive classes but less effective than individualized teaching in comprehensive classes. It is, however, emphasized that individualization in classes of great heterogeneity is extremely difficult to manage unless there are preconstructed programs and other teaching devices at hand.[14]

This conclusion can be readily assimilated into the terms that we have been using in this essay. Individualization is rarely, if ever a

real option in conventional classrooms because of inadequate resources and if, following Dahllöf, we hypothesize that time spent in learning a content unit is the major determinant of achievement over the unit, then mastery will be a function of the time that the teacher can spend on a given unit; but, if the teacher spends as much time with one unit as is necessary to secure mastery on the part of all students, he will not be able to secure coverage. He must weigh the merits of coverage against mastery; teachers seem, if we again follow Dahllöf, to resolve this problem by accepting that they will successfully teach only most students--the steering criterion is the bottom group in the range that the teacher attempts to reach. In other words, the identification of a steering criterion group is one way of managing the distribution of instruction to an aggregation of students of differing abilities when individualization is not feasible. This argument explains, to a considerable extent, the continuing and insistent preference of teachers for homogeneous grouping of students; the more homogeneous a class the narrower the range of dispersion around the steering criterion groups--it follows that, as the variance around the steering criterion group in a particular classroom narrows, the teacher's problems in both the management of waiting time for able students and the scheduling of units for coverage become simpler.

A later study by Dahllöf and Ulf Lundgren offers further support to the argument that the sources of teacher behaviors must be sought, and will be found, in conditions in the classroom itself rather than elsewhere. Transcripts of mathematics lessons in ten senior high school classes were categorized using an adaption of the Bellack classification system and the Amidon-Hunter Verbal Interaction Classification System (VICS).[15] Rank-order correlations between both mean class ability and the ability of the steering criterion group and an array of dependent variables derived from

the interaction analyses were computed; no significant correlations were found between class ability and interaction behavior, but consistently significant associations were found between the ability of the steering criterion group and a wide array of teaching behaviors. These results are set out in Table 5. Again these results seem convincing intuitively

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Insert Table 5 about here

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and are consistent with the claim that classroom behavior is adaptive to conditions in the setting of the traditional classroom.

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If the conception of the classroom entailed in this extended analysis of teaching can be sustained the facts of classroom life have profound implications for the nature of any suggestions about the ways in which teacher behavior must and can change in the interests of any curricular proposal. Exhortation that change is desirable or necessary will, indeed must, be futile unless change in classroom behavior is possible. Change, without change in the resources at the command of the teacher, cannot be expected to take place easily. Given the widespread nature of most existing classroom strategies and the fact that these particular strategies have been consistently and persistently preferred by teachers over others, it would seem plausible that we should believe that those procedures that are pervasive are adaptive, in some way, to problems posed by the environment of the classroom as we know it. These problems can, in large part, be defined in terms suggested by our conception of the four demands of

the classroom as these are modulated by the characteristics of the conventional classroom as a workplace. We should remember that in the main, the classroom environment and the materials available to teachers have not changed only slowly over at least the past half century; even individualization, although loudly praised, has not been widely adopted.

III

To this point we have been arguing inferentially: we have been showing how we can use our conception of the demands of coverage. mastery, management and affect that we believe are omnipresent in all group-instructional settings as a basis for interpretation, or reinterpretation of conclusions and findings from other studies. Let us now turn to an attempt to apply our conceptions directly to some of the complexities of the classroom. A direct examination of classrooms themselves suggests that some of the clarity of the analysis of classroom behavior that we have been presenting misses many of the nuances of the real classroom.

To this point we have been using simple labels, "recitation," "lecture," "discussion," to classify classroom methods; these generic labels obscure much of the complexity of the demands, and complexity of decision-making that teachers face when coping with the classroom environment. For example, teacher approaches that cope well with one kind of classroom demand, e.g. mastery, often complicate the task of meeting other demands (for example, affect or coverage) of the setting. An optimal coping strategy for the classroom must avoid, as far as possible, this trap of overemphasis on one goal. Only L.M. Smith and Geoffrey's study explores the ways teachers resolve these problems in any satisfactory degree, but while their study captures the complications of a teacher's classroom

decision-making, it fails to order the elements of this decision-making. Our non-participant, ethnographic study of six high school teachers aims at a more satisfactory ordering and conceptualization of what teachers do. We will present here an analysis of only one of these teacher's classroom behavior.

Math Teacher A is one of six high school teachers (two from each of the subject matter fields of math, English and social studies) observed for several months each. Like all of the teachers we observed Math Teacher A exhibited a very consistent pattern in her daily selection of teaching formats. (see Table 6) Her characteristic (or modal) lesson always

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Insert Table 6 about here

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started with a general query about the difficulties students had with the homework assignment. From the one or two comments that followed, she would select a problem and begin a very thorough step-by-step explanation by drawing a picture of the problem on the board in the form of a unit circle.*

Each 45 minute modal lesson consisted of four or five problems explained in this way. Throughout these explanations the teacher would use incomplete phrases such as "and then you would _____?" which prompted students at their desks to finish the sentence by calling out the appropriate number, term or mathematical process. At various junctures in each problem, the teacher would stop and ask if everyone was following or had any questions. Despite assurances from students that everything was just

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*This was an eleventh grade trigonometry class.

fine, the teacher would re-explain the point that she had just made or illustrate it with a different example, "just to be sure." This daily pattern was frequently interrupted by humorous teacher comments and interesting digressions into the origins and character of the mathematical solutions that were developed during the teacher explanations.

To analyze Math Teacher A's modal lesson, each of the first nine lessons that conformed to the modal format was broken down into a variety of teacher behaviors. (see Table 7) On the basis of this analysis, the

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Insert Table 7 about here

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teacher's basic approach and supplementary maneuvers were distinguished. (see Table 8) We distinguished the classroom behavior of this teacher

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Insert Table 8 about here

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that constituted her basic approach from that behavior which we felt constituted her supplementary maneuvers in two ways--by its frequency and by our perception of the centrality of different behaviors to what we felt was the central purpose of this teacher's classroom--the transmission of mathematical knowledge. Supplementary maneuvers cannot stand alone and the teacher still be "teaching."

The basic strategy and the supplementary maneuvers characteristic of this teacher's modal lesson were then rated for their presumed effect on

each of the four demands of the classroom.* These ratings are set out in Table 9. A plus rating implies that the teacher behavior could effect the demand, a minus rating implies that the behavior would impede the accomplishment of the demand; a parenthsis implies that, while we believed that an impact on a given demand was not the primary intent of the behavior, the behavior would nevertheless have some impact on this demand.

Table 9 illustrates the components of this one teacher's coping strategy. Her basic strategy of explanation and call out gave her coverage and control but it was, we inferred, deficient in developing mastery and did little to create any affect on the part of her students. Accordingly she used a variety of supplementary maneuvers to patch up the weaknesses of her basic approach. Overall then, her approach succeeded in meeting the demands of the setting.

All six of the teachers we observed demonstrated classroom approaches which were as viable as that of Teacher A; however, others used different approaches to the problem of coping: one alternated modal and secondary lesson formats, the secondary lesson functioning like supplementary maneuvers in compensating for weaknesses in the modal lesson format. Another used actions with powerful impact; thus severe grading compensated, we found, for a basic approach that failed to secure any real classroom control over task attention.

As this last example implies, teacher coping strategies vary not only in the way they determine the carrying out of the teaching task, but in the classroom goals they seemed to embody. There are seemingly grand

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*Many of the effects of teacher's basic approach or supplementary maneuvers do not materialize in terms of student outcomes. We analyzed these patterns by making intuitive judgments about their expected effect in any setting.

strategy decisions made by the teacher before he enters the classroom which, in effect, define the parameters of the demands of the classroom by defining what the overall demands of teaching should mean for this class this year. We found some of our teachers doing as William Geoffrey did, ignoring some goals of the curriculum to give themselves time to cope with other goals. Other teachers interpreted the classroom demands differently by selectively defining those kinds of student performance that should be taken as denoting mastery. These decisions of omission, interpretations and emphasis are all elements in a teacher's grand strategy, a different but important component of teacher coping strategy.

IV

It would be premature to attempt any discussion, at this point, of what this kind of theorizing and investigation might mean for Curriculum as an enquiry. If we have been able to convey our feeling that the classroom is a complex environment we will be satisfied. However, it is perhaps worth restating our conviction about what this kind of analysis means for us: the classroom is, we are suggesting, a system with only limited potentiality for manipulation by teachers. Not all teachers explore these limits, in part because of our lack of understanding of what methods are and our concomitant inability to teach teachers an array of viable coping strategies. Yet, while this possibility of teaching teachers to cope with the classroom more adequately is an important task for Education, Curriculum should be aware of the limits that face teachers who wish to use new methods or enact new goals within the constraints of the classroom setting as we know it. The range of possible new methods have, we believe, long since been set by the range of methods that are now widely used by teachers; the

coping strategies that are now available are those that have survived after many years of evolutionary struggle. The fact that evolution has not allowed much of what Curriculum has traditionally espoused to survive should make us more cautious about what we recommend and urge and, at the same time, lead us to a fundamental question: "Can we redesign the classroom as a whole so that it imposes different constraints on the teacher?"[16] A careful examination of the existing classroom should, in its turn, be one important ingredient of such a redesign for unless we look to find what is possible we always run the danger that a given new design might not, in its turn, be organizationally and pedagogically viable. The conventional classroom, we would emphasize, has shown that it is viable. That viability vis-á-vis our conventional conceptions of what classrooms are, is, in large measure, the reason for its persistence and also the greatest problem for those who want change.

NOTES

1. James Hoteker and William P. Ahlbrand, Jr., "The Persistence of the Recitation," American Educational Research Journal 6(1969), p. 163.

2. For this argument see Israel Scheffler, The Language of Education (Springfield, Ill.: Charles C. Thomas, 1960), ch. 4 and B. Paul Komisar, "Teaching: Act and Enterprise," Studies in Philosophy and Education 6 (1968), pp. 168-193.

3. Kaspar Naegele, "Clergymen, Teachers and Psychiatrists: A Study in Roles and Socialization," The Canadian Journal of Economics and Political Science, 22(1956), pp. 53-54; for these arguments, see Charles Bidwell, "The School as a Formal Organization" in Handbook of Organizations, ed. James G. March (Chicago: Rand, McNally and Co., 1965), pp. 972-1018; and Robert Dreeben, "The School as a Workplace," in Second Handbook of Research on Teaching, ed. R.M.W. Travers (Chicago: Rand, McNally and Co., in press).

4. For a development of this conceptualization of demands, see Jon Abrahamson, The Teaching Dilemma: The Conflict Between Bureaucratic and Personal Functions. Unpublished Ph.D. proposal, Department of Education, University of Chicago, 1970.

5. A.B. Hodgetts, What Culture? What Heritage? (Toronto, Ont.: Ontario Institute for Studies in Education, 1968), pp. 41-43.

6. Ibid., p. 53: for types of lessons, see pp. 44-56.

7. For the term "coping strategy," see Abrahamson, op. cit.

8. Louis M. Smith and William Geoffrey, The Complexities of an Urban Classroom (New York: Holt, Rinehart and Winston, 1968).

9. Ibid., p. 183.

10. Ibid., pp. 183-184: italics added.

11. Ibid., p. 184.

12. Paul V. Gump, "What's Happening in the Elementary School Classroom," in Research into Classroom Processes, eds. Ian Westbury and Arno A. Bellack (New York: Teachers College Press, 1971), p. 155-65. See also Paul V. Gump, The Classroom Behavior Setting: Its Nature and Relation to Student Behavior. Final Report, U.S. Office of Education Project No. 2453 (Lawrence, Kansas: Midwest Psychological Field Station, University of Kansas, 1967).

13. Gump, "What Happening in the Elementary School Classroom," p. 161.

14. Urban S. Dahllof, Ability Grouping, Content Validity, and Curriculum Process Analysis (New York: Teachers College Press, 1971), p. 91. See also Ch. 10.

15. Urban S. Dahllof and U. Lundgren, A Project for Testing and Developing Macro-models for the Curriculum Process. Project Compass 12. Reports from the Institute of Education, University of Goteborg, 1969; Urban S. Dahllof and U. Lundgren, Macro and Micro Approaches Combined for Curriculum Process Analysis. (Paper presented to Annual Meeting of American Educational Research Association, Minneapolis, 1970.) Reports from Institute of Education, University of Goteborg, No. 10, 1970; Urban S. Dahllof, Ulf P. Lundgren, and Margaret Sioo, "Reform Implementation Studies as a Basis for Curriculum Theory: Three Swedish Approaches," Curriculum Theory Network, 7(1971),

pp. 99-117. The preliminary results reported here were described by Dahllof and Lundgren in a seminar in Goteborg, Sweden, July, 1971.

16. For a discussion of this problem in the terms we have used in this paper, see Ian Westbury, "Conventional Classrooms, 'Open' Classrooms, and the Technology of Teaching." Unpublished paper, Department of Education, University of Chicago.

Table 1: Pedagogical Activities of Three High School Social Studies Teachers

	Teacher A	Teacher B	Teacher R
No. of periods observed	19	16	22
Kinds of pedagogical activities			
Managing	23	14	20
Lecturing, Recitation	26	14	26
Discussion	6	5	6
Disciplining	9	2	1
Individual student activity (seatwork)	11	5	3
Other	9	2	7
Total	84	42	73

Note: Reprinted from Ian Westbury, An Investigation of Some Aspects of Classroom Communication. Unpublished doctoral dissertation, University of Alberta, 1968.

Table 2: Per Cent of Each Teacher's Acts Devoted to Various Functions. Days 1 and 2 Averaged

	Mrs. Apple	Mrs. Berry	Mrs. Carr	Mrs. Dodd	Mrs. Eddy	Mrs. Ford	Mean Per Cent
TEACHING	44	38	65	50	59	48	51
Recitation Questions	30	25	51	36	42	28	35
Feedback	6	5	7	7	8	10	7
Knowledge	5	6	6	5	7	10	7
Work Status Questions	3	2	1	2	2	1	2
STRUCTURING BEHAVIOR	25	31	19	22	20	21	23
Movement of Props, Pupils	11	10	9	9	10	9	10
Structure	8	9	5	8	6	8	7
Attention Changes	4	6	3	3	2	3	3
Information Seeking	2	6	2	2	2	1	3
DEALING WITH DEVIATING BEHAVIOR	15	19	8	16	9	19	14
Stance, Energy Improvement	7	11	5	5	3	10	7
Countering	7	7	3	9	5	8	6
Permission	1	1	0	2	1	1	1
OTHER ACTS	16	12	8	12	12	12	12
Individual Problems	11	6	6	8	10	8	8
Amenities and Miscellaneous	5	6	2	4	2	4	4

Note: Reprinted from Paul V. Gump, The Classroom Behavior Setting: Its Nature and Relation to Student Behavior. Final Report, U.S. Office of Education, Project No. 2453 (Lawrence, Kansas: Midwest Psychological Field Station, University of Kansas, 1967), p. 54.

TABLE 3

Relationship Between Pacing and Per Cent of Student Involvement

	Per Cent of Student Involvement
Beginnings of Self-Paced Segments	63
Remainder of Self-Paced Segments	74
Beginnings of Externally-Paced Segments	75
Remainder of Externally-Paced Segments	81

Note: Reprinted from Paul V. Gump, "What's Happening in the Elementary School Classroom," in Research into Classroom Processes, eds. Ian Westbury and Arno A. Bellack (New York: Teachers College Press, 1971), p.

Table 4: Segment Patterns Accounting for Pupil Occupancy Times of More than Two Per Cent of Total

Concern	Teacher Leadership	Grouping Arrange	Pupil Activity	Action Sequencing	Number of Segments	Total Occupancy Time of Segments (minutes)
Reading	Recit Leader	Group Interdep	Cls Evnts Attnd	Ext Pace Serial Perform	62	6,644
Reading	Action Director	Group Interdep	Cls Evnts Attend	Ext Pace Serial Perform	21	2,036
Lang	Recit Leader	Class Interdep	Cls Evnts Attend	Ext Pace Serial Perform	5	2,924
Lang	Watcher-Helper	Class Private	Own Matrl Task	Self Pace	4	2,284
Lang	Tester	Class Private	Cls Evnts Task	Ext Pace No Perform	5	2,157
Social Studies	Recit Leader	Class Interdep	Cls Evnts Attend	Ext Pace Serial Perform	5	2,399
Science	Recit Leader	Class Interdep	Cls Evnts Attend	Ext Pace Serial Perform	5	2,148
Arith	Recit Leader	Class Interdep	Cls Evnts Attend	Ext Pace Serial Perform	5	2,351
Mixed Academ	Watcher-Helper	Class Private	Own Matrl Task	Self Pace	4	3,997
Mixed Academ	Recit Leader	Class Interdep	Cls Evnts Attend	Ext Pace Serial Perform	7	2,617
Mixed Academ	Not in Segment	Group Private	Own Matrl Task	Self Pace	14	20,606

Table 4: continued

Concern	Teacher Leadership	Grouping Arrange	Pupil Activity	Action Sequencing	Number of Segments	Total Occupancy Time of Segments (minutes)
Music	Action Director	Class Interdep	Sing, Chant Play Instru-ments	Ext Pace Mass Perform	9	2,439
Milk Story	Reader	Class Interdep	Cls Evnts Attend	Ext Pace No Perform	6	2,126

Note: From Paul V. Gump, The Classroom Behavior Setting: Its Nature and Relation to Student Behavior. Final Report, U.S. Office of Education, Project No. 2453 (Lawrence, Kansas: Midwest Psychological Field Station, University of Kansas, 1967), p. 48.

Table 5:
Relationship between IQ of Steering Criterion Group and Types of Teacher Behaviors in Swedish Mathematics Class (Grade 11)

	Direction of relationship	Type of Teacher Behavior
Bellack System[1]		
Higher IQ of steering criterion group	increase in	Responding moves
	decrease in	Helping moves
	increase in	Positive ratings
	decrease in	Negative ratings
	increase in	Substantive by relevant moves
	increase in	Interpreting statements
Verbal Interaction Classification System (VICS)[2]		
Higher IQ of steering criterion group	decrease in	Teacher-initiated information
	increase in	Teacher accepting ideas
	increase in	Narrow questions
	increase in	Student predictable answers
	decrease in	Teacher informing
	increase in	Teacher leading discussion
	decrease in	Teacher disciplining

[1]A.A. Bellack et al, The Language of the Classroom (New York: Teachers College Press, 1966)

2

Note: Urban S. Dahllof and Ulf Lundgren, Institute of Education, University of Goteborg, personal communication.

Table 6: A Day by Day Classification of Math Teacher A's Lessons Into Modal and Non-Modal Lessons

January 5	Missed	February 2	Modal Lesson
January 6	Does not meet	February 3	Does not meet
January 7	Modal Lesson	February 4	Modal Lesson[3]
January 8	Modal Lesson	February 5	Modal Lesson
January 9	Modal Lesson	February 6	Modal Lesson[4]
January 12	Modal Lesson	February 9	Holiday
January 13	Does not meet	February 10	Does not meet
January 14	Modal Lesson	February 11	Test
January 15	Modal Lesson[1]	February 12	Recitation
January 16	Modal Lesson	February 13	Modal Lesson[5]
January 19	Modal Lesson	February 16	Modal Lesson
January 20	Does not meet	February 17	Does not meet
January 21	Modal Lesson[2]	February 18	Teacher absent
January 22	Modal Lesson	February 19	Modal Lesson
January 23	Modal Lesson		
January 26	Test		
January 27	Does not meet		
January 28	Modal Lesson		
January 29	Modal Lesson		
January 30	Modal Lesson		

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[1]The class began with a ten to fifteen minute quiz before it began the modal lesson format.

[2]The modal lesson format was applied to problems that were on the test instead of homework problems.

[3]The teacher individualized instruction for the first and only time during the seven week period. She worked with the slowest student in the class for five minutes while the rest of the class did a problem at their desks. There was much fooling around by the other members of the class during this five minute period.

[4]The teacher made a series of disciplinary comments during this lesson that was not typical for the modal lesson. She blamed student inattention on the dreary weather outside. It was also the day before a four day vacation.

[5]The same as footnote #2.

Table 7: Quasi-Statistical Tabulation of Teacher Statements and Non-Verbal Actions

Teacher Behavior	Jan. 7	8	9	12	14	15	16	19	21	Total
#1. Asks class a question about problem she is explaining	25	9	20	13	12	10	12	21	17	139
#2. Draws illustration of problem on the board	8	6	10	5	8	3	4	10	7	61
#3. Asks class if materials covered so far is clearly understood	8	3	8	5	8	2	7	4	13	57
#4. Initiates a lengthy explanation of math problem (3 sentences or more)	12	4	4	4	5	3	5	4	9	50
#5. Responds briefly (1 or 2 sentences) to a student question	4	5	2	8	5	7	4	3	-	38
#6. Emphasizes some math operation that has to be learned or is important	2	1	2	-	3	-	6	2	2	18
#7. Employs light-hearted, humorous comment	3	4	4	1	1	1	1	2	1	18
#8. Asks specific student question about problem she is explaining	6	3	2	4	1	-	-	-	1	17
#9. Explains the same math operation just completed in another way	1	1	2	3	5	-	1	1	1	15
#10. Makes statement about nature of math in general	-	3	-	3	-	1	3	-	2	13
#11. Draws a picture of the unit circle on board to use in explanation	1	1	3	1	-	1	3	1	2	13
#12. Asks students to try a problem at their desks	1	1	2	2	-	1	2	1	3	13
#13. Makes appreciative comments about the beauty of mathematics	-	-	1	1	1	3	3	-	1	10
#14. Asks specific student if he understands what is going on in class	1	1	3	-	2	-	-	1	1	9
#15. Explains one more example of the same math operation	1	-	3	1	2	-	-	-	1	8

Table 7: continued

Teacher Behavior	Jan. 7	8	9	12	14	15	16	19	21	Total
#16. Reviews what has been done so far or summarizes where the class is at	1	2	1	2	-	-	-	1	2	8
#17. Gives the class an assignment for homework	1	2	1	1	1	1	-	1	-	8
#18. Directs student attention to page in the text	-	-	2	3	1	-	1	1	-	8
#19. Explains (more than 2 sentences) a point in response to st. question	-	1	-	1	2	1	1	2	-	8
#20. Employs repartee in responding to student comment	4	-	-	-	1	-	1	-	1	7
#21. Describes the historical origins of math principles being taught	-	-	-	1	-	-	-	6	-	7
#22. Makes suggestion to class to think about something or practice it	1	-	1	2	1	-	1	1	-	7
#23. Employs eccentric word in describing some situation	2	1	1	-	-	-	1	1	-	6
#24. Deals with one student's difficulty for several seconds	1	1	-	2	-	-	1	-	1	6
#25. Adds to and/or develops a student's response	1	1	2	1	1	-	-	-	-	6
#26. Seeks specific information from the class that she does not know	-	2	-	2	-	-	1	-	1	6
#27. Does the problem herself at the board as students try it at desks	-	1	-	2	1	-	-	1	1	5
#28. Ignores or does not acknowledge as correct a student response	-	1	2	-	-	-	-	-	2	5
#29. Apologizes to class for something she has done	1	1	-	-	1	-	1	-	1	5
#30. Gives a hint while students are trying to do problem at desk	-	-	1	2	-	1	1	-	-	5
#31. Asks class for the answer to a problem on homework	-	-	-	1	4	-	-	-	-	5

Table 7: continued

Teacher Behavior	Jan. 7	8	9	12	14	15	16	19	21	Total
#32. Answers her own question when no student attempts to answer it	-	-	-	-	-	-	1	-	4	5
#33. Restates initial question because of inadequate student response	2	-	-	1	-	-	-	-	2	5
#34. Asks student to explain how to do a problem while she writes it on board	1	-	2	-	-	-	1	-	1	5
#35. Asks what answer a particular student got on a problem	1	-	-	1	2	-	-	-	-	4
#36. Collects homework	-	1	1	1	1	-	-	-	-	4
#37. Re-explains in more detail a math operation because of st. confusion	-	2	1	-	-	-	-	-	1	4
#38. Displays a little frustration at having to repeat a point made prev.	-	-	1	-	1	-	1	-	1	4
#39. Comments on sloppiness of her math or notation when doing problem	-	-	-	1	1	-	-	1	1	4
#40. Shows the class a math trick or short-cut	-	-	-	-	1	-	1	-	1	3
#41. Displays strong appreciation of a student response	-	1	-	2	-	-	-	-	-	3
#42. Asks a question in response to a student question	-	-	-	-	1	-	-	-	-	3
#43. Explains a math operation "just to be sure"	-	1	-	1	-	-	-	-	1	3
#44. Applies math principle just learned to some area of student interest	-	3	-	-	-	-	-	-	-	3
#45. Asks students to try to do a math problem in their heads	-	2	-	1	-	-	-	-	-	3
#46. Postpones an issue to later on in lesson or unit	-	-	-	-	1	-	-	1	1	3

Table 7: continued

Teacher Behavior	Jan. 7	8	9	12	14	15	16	19	21	Total
#47. Supportive response to student comment or answer	-	-	-	-	-	-	-	-	3	3
#48. Refuses to deal with an issue raised by a student	-	2	-	-	-	-	-	-	-	2
#49. Jokes informally with students before or after class	-	1	1	-	-	-	-	-	-	2
#50. Asks student to do a classroom chore for her	-	-	1	-	-	-	-	1	-	2
#51. Looks at one particular student while explaining something to class	-	-	-	2	-	-	-	-	-	2
#52. Makes a specific disciplinary comment to a particular student	1	-	-	-	-	-	-	-	1	2
#53. Encourages a reluctant student to respond to a question	-	1	1	-	-	-	-	-	-	2
#54. Responds to student question that class need not hand in homework	-	-	-	-	-	1	1	-	-	2
#55. Makes a few comments about the homework assignment	-	-	-	-	-	1	1	-	-	2
#56. Talks to herself	-	-	-	-	-	-	-	2	-	2
#57. Asks student for a reason after he makes a reply	-	-	-	1	-	-	-	-	1	2
#58. Praises good student question	-	-	-	-	-	-	-	-	2	2
#59. Allows students to do as much or as little on homework as they need	-	1	1	-	-	-	-	-	-	2
#60. Decides to change a problem after initially drawing it on the board	-	-	-	-	-	-	-	-	2	2
#61. Goes to student's desk to help with a problem	-	-	1	-	-	-	-	-	-	1
#62. Leaves class to get something	-	-	1	-	-	-	-	-	-	1
#63. Gives differentiated direction. Part of class do one thing; others do something else	-	-	-	1	-	-	-	-	-	1

Table 7: continued

Teacher Behavior	Jan. 7	8	9	12	14	15	16	19	21	Total
#64. Re-enforces school rule when asked if student must comply	-	-	-	-	1	-	-	-	-	1
#65. Asks a student to answer a question that was raised by another student	-	-	-	-	1	-	-	-	-	1
#66. Drills the class on a series of simple items, all calling for the same operation	-	-	-	-	1	-	-	-	-	1
#67. Asks the class to be quiet	-	1	-	-	-	-	-	-	-	1
#68. Makes an explicit statement about the need to move on to a new topic	-	-	-	-	1	-	-	-	-	1
#69. Dismisses the class before the bell rings	-	-	-	-	-	1	-	-	-	1
#70. Makes a deal with students. If you do....., no homework	-	-	-	-	-	-	1	-	-	1
#71. Passes back student papers	-	-	-	-	-	-	-	1	-	1
#72. Repeats information for late student	-	-	-	-	-	-	-	1	-	1
#73. Defends her record of doing what she claims she will do	-	-	-	-	-	-	-	1	-	1
#74. Makes a general disciplinary comment to the class	-	-	-	-	-	-	-	-	1	1
#75. Gives a knowing look to a student after doing problem on the board	-	-	-	-	-	-	-	-	1	1
#76. Asks student to think up a question of a certain type for class to do	-	-	-	-	-	-	-	-	1	1
#77. Previews what topics are coming up in the future	-	-	-	-	-	-	-	-	1	1
#78. Introduces a visitor to the class	1	-	-	-	-	-	-	-	-	1
#79. Makes statement that she wants the lesson to begin	-	-	1	-	-	-	-	-	-	1

Table 7: continued

Teacher Behavior	Jan. 7	8	9	12	14	15	16	19	21	Total
#80. Asks students for another approach to a problem after receiving one	-	-	-	1	-	-	-	-	-	1
#81. Asks class if they are prepared to work hard	-	-	-	-	-	-	1	-	-	1
#82. Reviews the major point of a problem before explaining it in detail	-	-	-	-	-	-	1	-	-	1
#83. Pauses and surveys class without making any comments	-	-	-	-	-	-	1	-	-	1
#84. Gives instructions for upcoming classroom activity	-	-	-	-	-	-	-	1	-	1
#85. Assures class that math operation that class has to perform is easy	-	-	-	-	-	-	-	1	-	1
#86. Officially terminates a lesson	-	-	-	-	-	-	-	1	-	1
#87. Comments on absenteeism while taking attendence	-	-	-	-	-	-	-	-	1	1
#88. Warns students about a typical mistake that is often made	-	-	-	-	-	-	-	-	1	1

Table 8: Math Teacher A's Modal Lesson

	Affect[1]	Coverage[2]	Mastery[3]	Control[4]
Basic Strategy				
Teacher Explanation (#4)	-	+	-	----
Student Call-Outs (#1)	(+)	(+)	----	+
Supplementary Tactics				
"Make Sure Everyone is Following Along." (#3)	----	(-)	+	----
"Go Over it One More Time for Good Measure." (#9, 15, 36, 16, 42)	----	(-)	+	----
"Sense of Humor" (#17, 20, 23)	+	----	----	(+)
"Pedagogical Side-trips and Side Comments." (#10, 43, 21, 13)	+	(-)	----	----
"Illustrate on Board" (#2, 11)	----	----	+	(+)

NOTES:

1. The Task - Unlike teachers who enter their positions voluntarily, students are conscripted and held in schools until they reach a certain age. Teachers must not only convey subject matter content to these students, but they must also create positive dispositions toward the values inherent in the particular subject matter and schooling in general. If a teacher tries to force students to learn by relying exclusively on her authority as a teacher, she will reap classroom behavior that may be externally appropriate, but that will undermine the long-range goals of instruction.

Typical Methods Used By Teachers To Accomplish The Task - In order to develop positive student affect, teachers may: provide an active role for students in classroom activities, become a source of humor or intertainment or select content that appeals to student interest.

Table 8: NOTES continued

2. The Task - Almost all teachers have an agenda of topics or a prescribed curriculum that must be covered by the end of the year. Teacher efforts to satisfy this demand must be shaped to fit a schedule that consists of fifty minute time blocs and five day weeks. Unless the teacher constantly makes allowances for this demand and proceeds at a fairly rapid pace, she will "fall behind" and may never catch up. In the classroom this demand may manifest itself in many ways: (1) finishing a problem by 8:54 so that the teacher will have time to explain tonight's homework, (2) getting to the end of the unit by Friday so that the class can have a test on Monday or (3) completing "The American Revolution" by Christmas or "Fractions" by Easter. In highly sequential subjects this demand is strongest.

Typical Methods Used By Teachers To Accomplish The Task - In order to cover topics rapidly teachers may: minimize student participation in the conduct of the lesson, avoid calling on students who might not know or have difficulty explaining the material, assign work to be done by students outside of class and make explicit comments to the class such as "hurry up" and "we've got to finish this by the end of the period."

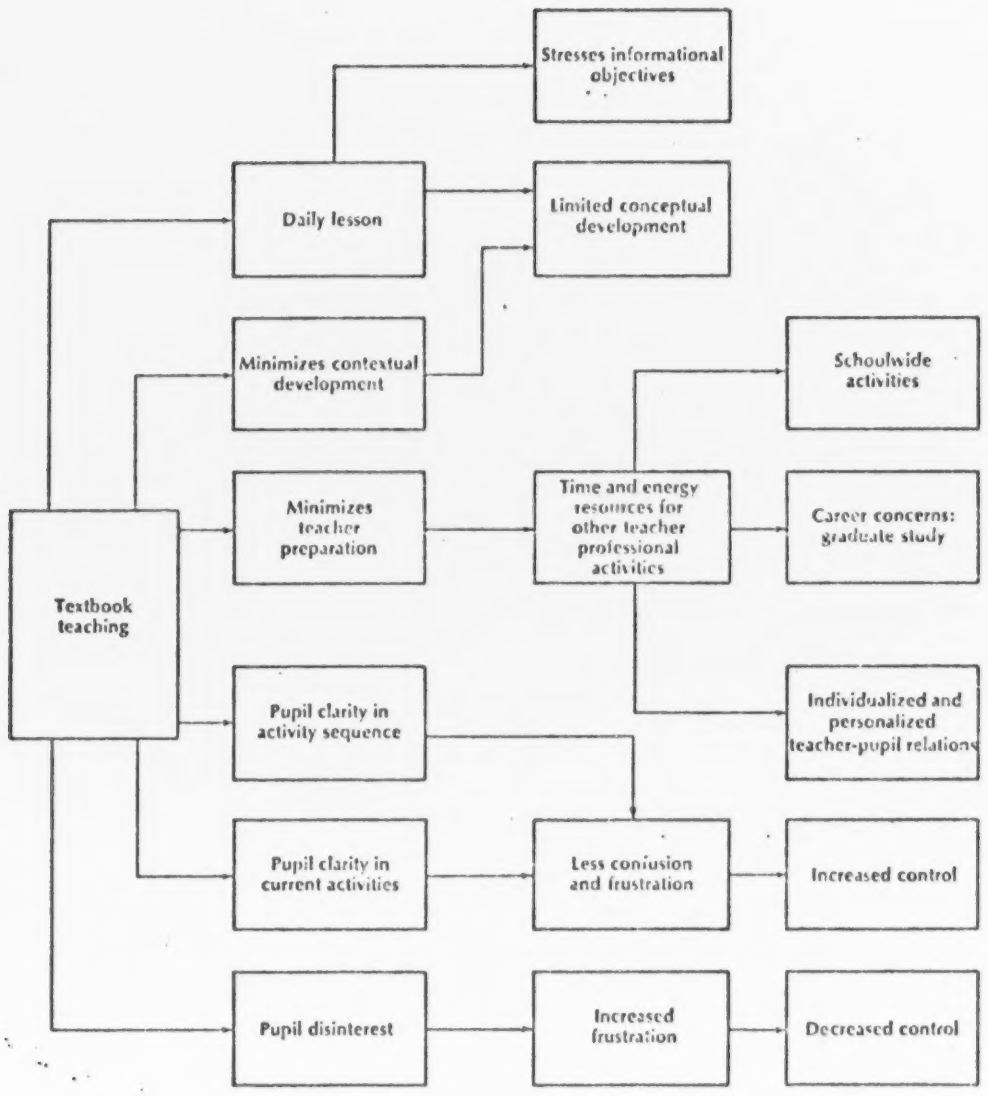
3. The Task - Rarely do all of the students in a particular classroom master the goals of a lesson after an initial reading of the text or after an initial teacher explanation. Many individual student difficulties persist after an initial learning experience. These remaining misconceptions must be detected and eliminated before the material can be mastered by the class and the teacher can move on to the next topic. The kind of mastery required of students (recall of factual information, understanding, etc.) varies from teacher to teacher.

Typical Methods Used By Teachers To Accomplish The Task - In order to improve student performance teachers often: allow for extensive student practice, provide feedback on student errors, permit opportunities for student questions to clarify problems or illustrate the same point with multiple examples.

4. The Task - Students must pay attention to classroom activities and not interfere with the learning of other students if the class is to accomplish the learning goals set out by the teacher in the time alloted. This task is made difficult in the typical classroom setting of thirty students by the fact that any teacher attempt to deal with individual problems in order to improve mastery or create positive student affect runs the risk of losing the attention of the other twenty-nine.

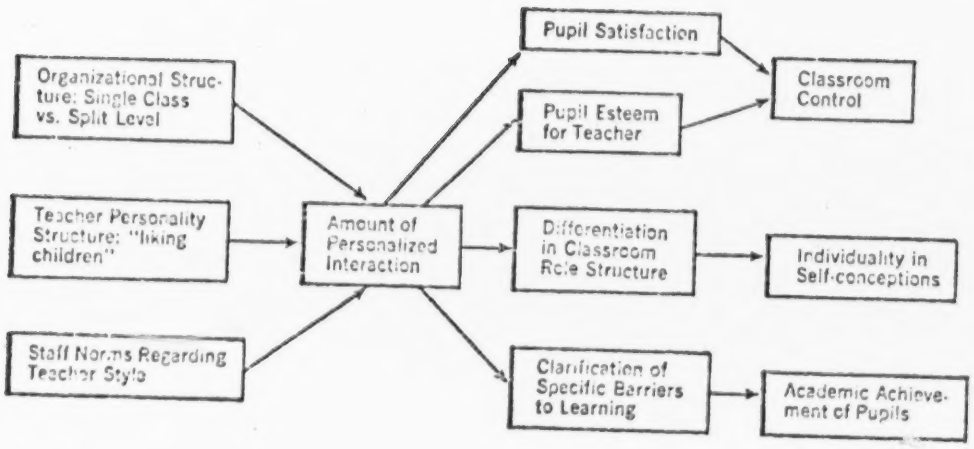
Typical Methods Used By Teachers To Accomplish The Task - In order to maintain classroom attention and control, teachers may: create a strong group focus, make individual students accountable by calling on them or utter disciplinary comments or threats.

Figure 1: Impact of Textbook Teaching on Aspects of Classroom and School Social Structure and Processes



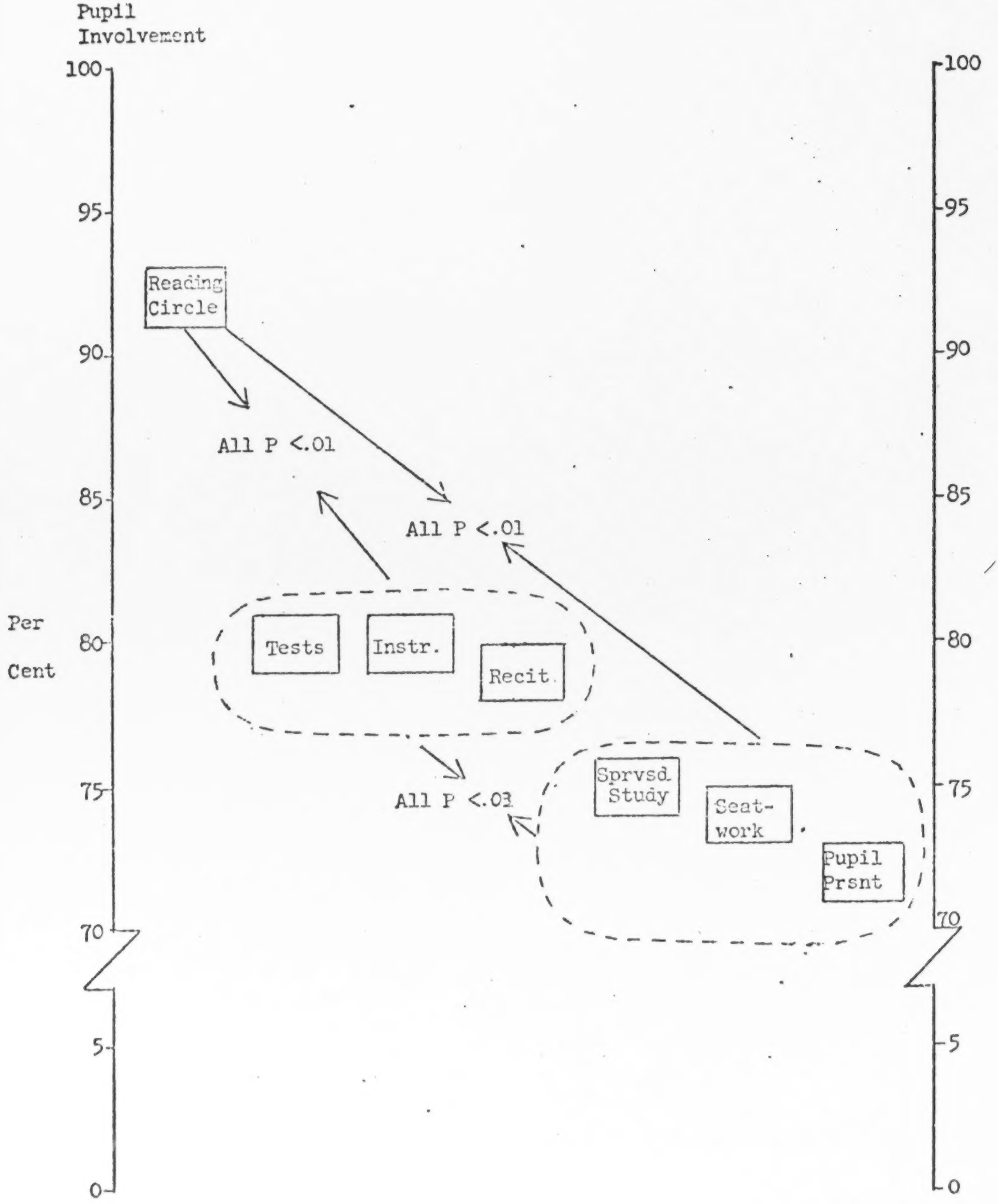
Note: Reprinted from Louis M. Smith and William Geoffrey, The Complexities of an Urban Classroom (New York: Holt, Rinehart and Winston, 1968), p. 183

Figure 2: A Miniature Theory of Personalized Interaction


Organizational Structure: Single Class vs. Split Level
Teacher Personality Structure: "liking children"
Staff Norms Regarding Teacher Style
Amount of Personalized Interaction
Pupil Satisfaction
Pupil Esteem for Teacher
Differentiation in Classroom Role Structure
Clarification of Specific Barriers to Learning
Classroom Control
Individuality in Self-conceptions
Academic Achievement of Pupils

Note: Reprinted from Louis M. Smith, "A Perspective on a Theory of Urban Teaching," in Research into Classroom Processes, eds. Ian Westbury and Arno A. Bellack, New York: Teachers College Press, 1971, p. 172.

Figure 3: Per Cent of Pupil Involvement During Segments of Different Types



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